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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,985	06/30/2003	Seong Eun Heo	9988.036.00-US	6979
30827	7590	08/02/2005	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP			BRINSON, PATRICK F	
1900 K STREET, NW			ART UNIT	
WASHINGTON, DC 20006			PAPER NUMBER	

3754

DATE MAILED: 08/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/607,985

Applicant(s)

HEO ET AL

Examiner

Patrick F. Brinson

Art Unit

3754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 May 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The amendment filed 17 May 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The limitations of claims 13-15 do not find support in the specification and/or drawings. There is no support for an embodiment where the first bellows is disposed within the elastic connection member and the first end portion further comprises a cylindrical portion connected to the first bellows, as recited in claims 13-15.

Applicant is required to cancel the new matter in the reply to this Office Action.

2. The disclosure is objected to because of the following informalities: The specification, page 9, next to last line recites "after inserting a portion of the second bellows 130 in the second bellows 130", which is not clear. Additionally, page 13, next to last line recites "...and a second bellows, 130, well.", which also is not clear.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-9, 11, 25-28, 30-33, 35, 37 and 38 are rejected under 35 U.S.C.

103(a) as being unpatentable over **Tamborini** in view of U.S. 4,852,564 to **Sheridan et al.**

The **Tamborini et al.** reference discloses a drain hose for an appliance, fig. 1, comprising a first cylindrical end portion (7), comprising a first bellows (6), being connectable to a water outlet, a second cylindrical end portion (2) portion comprising a bellows (3) that is able to form a permanent bend when a temporary bending force is applied thereto, and a flexible corrugated portion (4) connection between the first cylindrical end portion and the second end portion. The hose also includes a third bellows (4) that is able to permanently expand or retract when a first temporary force pulling or pressing is applied. The first flexible portion being located between the first end portion and the third bellows and the second flexible corrugated portion located between the

third bellows and the second end portion, as recited in claim 25. The permanent bend is a bend of 180 or 90° arc, as recited in claims 2 and 35. Col. 2, lines 51-55 discloses an elastic connection member integrally molded to the first and second cylindrical end portions, being sealably connectable to the water outlet and drain pipe, respectively. The **Tamborini et al.** reference does not disclose the first and second cylindrical ends comprising at least one annular ring externally formed thereon to prevent the molded connection member from disengaging from the end. The patent to **Sheridan et al.** discloses a corrugated flexible tube, fig. 7, having ends (17 and 18a). The end (18a) includes an annular ring (42) onto which molded connection member (24a) is locked, thus preventing disengagement. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide to the ends of the flexible tube of **Tamborini et al.** an external ring, as suggested by **Sheridan** in order to provide a means of locking the member onto the end of the cylindrical end portion.

4. Claims 5 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tamborini et al.** in view of **Sheridan** as applied to claims 1 and 25 above, and further in view of U.S. 5,507,319 to **Kanao**.

The patent to **Tamboini et al.**, as modified, does disclose the bellows of the ends having a plurality of folds forming the permanent bends, but does not

disclose the plurality of folds comprising an inclined wall extending from a left lower point to a middle peak point and a declined wall extending from the middle peak point to a right lower point, with the angle formed between the inclined wall and a vertical axis passing through the middle point being greater than the second angle formed between the vertical axis and the declined wall.

The patent to '319 **Kanao** discloses a synthetic resin bellows pipe utilized as a drain pipe for an appliance such as a washing machine, having locking bellows, fig. 2A, comprising an inclined wall (2) extending from a left lower point to a middle peak point (4) and a declined wall (3) extending from the middle peak point to a right lower point, with the angle formed between the inclined wall and a vertical axis passing through the middle point being greater than the second angle formed between the vertical axis and the declined wall. It would be obvious to one having ordinary skill in the art at the time the invention was made to modify the folds of the bellows of **Tamboini et al.**, as modified, to have an angle of one side of the fold to be greater than the angle of the other side of the fold, as suggested by **Kanao** wherein it is known that this type of bellow construction may be used to provide a stable position of the flexible tube.

5. Claims 10, 29, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tamboini et al.** in view of **Sheridan** as applied to claims 1 and 25 above, and further in view of U.S. 5,311,753 to **Kanao**.

The **Tamboini et al.** reference, as modified, does not disclose the elastic connection member integrally molded to a portion of the permanently bent bellows. The patent to **Kanao** does disclose a connection member integrally molded to the bellows and being sealingly connected to the drain pipe and water outlet. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the **Tamboini et al.** hose, as modified, to form the connection member integrally with the bellows as suggested by '753 **Kanao** in order to alternatively connect the hose to the water outlet or drain pipe, wherein providing the connecting member to the bellows or to a cylindrical portion extending from the bellows will equally function to connect the hose to the washing machine and/or the water outlet.

6. Claims 12, 17, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 5,311,753 to **Kanao** in view of U.S. 5,335,945 to **Meyers**.

The patent to **Kanao** discloses a drain hose, fig. 1, for use with a clothes washing machine (A) or the like having a first portion (1) being connectable to the water outlet, the first end comprising a first bellows (2), a second end portion being connectable to a drain pipe, formed of bellows parts that include

shorter inclined walls (5) and longer inclined walls (6) that self hold their contracted and extended positions. It is disclosed that the first bellows (2) may also be formed of the shorter and longer inclined walls as the second bellows so that both may form a permanent bend when a first temporary bending force is applied thereto. A flexible corrugated portion (4) is connected between the first and second end portions and connections (1, 3) are directly connected to the bellows portions, as recited in claims 12. **Kanao** discloses the recited structure but does not specifically disclose that the bellow is disposed within the connection member. The patent to **Meyers** discloses a flexible hose connector for use with corrugated pipes having applications as drainage components. Figs. 9 and 12 illustrate the bellows or corrugations within the flexible connector and it is disclosed that the flexible connector provides a water-tight flow seal between the bellows and the connector. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the connection member of **Kanao** to fit directly onto the bellows so that the bellows extends within the connector, as taught by **Kanao** in order to provide a connection that is tightly sealed and that is able to grip onto the water train.



7. Claims 17-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over '753 **Kanao** in view of **Meyers** as applied to claim 12 above, and further in view of **Tamborini**.

The patent to **Kanao**, as modified, does not specifically disclose the connector as an elastic connector integrally molded to a portion of the bellows, nor does **Kanao** disclose a cylindrical portion directly connected to the second bellows.

The patent to **Tamborini** discloses an outlet hose construction including a connection that is overmolded onto the corrugated end of the pipe formed of a thermoplastic rubber material and cylindrical portion connected between the second bellow and an end connection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute for the connections of **Kanao**, as modified, elastic connections that are integrally molded with the first bellows portions of the hose, and to modify the second bellows end to have a cylindrical portion between the second bellows and the drain pipe connection, both as suggested by **Tamborini** in order to alternatively connect the ends of the hose onto the drain pipe and water outlet.

8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Kanao** in view of **Meyers** as applied to claim 12 above, and further in view of **Tamborini** and **Sheridan**.

The patent to **Kanao**, as modified, does not specifically disclose the connector as an elastic connector integrally molded to a portion of the bellows, nor does **Kanao** disclose a cylindrical portion directly connected to the second bellows, nor an annular ring externally formed thereon to prevent the connection from being disengaged from the second end. The patent to **Tamborini** discloses an outlet hose construction including a connection that is overmolded onto the corrugated end of the pipe formed of a thermoplastic rubber material and cylindrical portion connected between the second bellow and an end connection. **Sheridan** discloses that it is old and known to provide an annular ring onto the end of a cylindrical portion of pipe in order to prevent the elastic connection from becoming disengaged. It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute for the connections of **Kanao**, as modified, elastic connections that are integrally molded with the first bellows portions of the hose, and to modify the second bellows end to have a cylindrical portion between the second bellows and the drain pipe connection, with the cylindrical portion including an annular ring, as suggested by **Tamborini** and **Sheridan** in order to alternatively connect the ends of the hose onto the drain pipe and water outlet, and to alternatively prevent the end connection from becoming disengaged.

9. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over ‘753 **Kanao** in view of **Meyers** as applied to claim 12 above, and further in view of U.S. ‘319 to **Kanao**.

The patent to **Kanao**, as modified, discloses the bellows having inclined and declined walls to provide a permanent contraction and extension and to provide a permanent bend when a temporary force is applied thereto, but discloses the first angle between the inclined wall and a vertical axis as being smaller than the angle between the vertical axis and the declined wall. The ‘319 **Kanao** reference discloses a synthetic resin bellows pipe utilized as a drain pipe for an appliance such as a washing machine, having locking bellows, fig. 2A, comprising an inclined wall (2) extending from a left lower point to a middle peak point (4) and a declined wall (3) extending from the middle peak point to a right lower point, with the angle formed between the inclined wall and a vertical axis passing through the middle point being greater than the second angle formed between the vertical axis and the declined wall. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the inclined and declined walls of the bellows of ‘753 **Kanao** such that the angle between the inclined wall is greater than the angle between the declined wall and vertical axis, as suggested by ‘319 **Kanao**, wherein it is shown that one arrangement is merely an mirror image of the

other and both function to provide a self holding extension, contraction or bending bellows arrangement.

***Response to Amendment***

10. In response to Applicant's argument that the Sheridan reference is nonanalogous art, it has been held that the determination that a reference is from a nonanalogous art is twofold. First, we decide if the reference is within the field of the inventor's endeavor. If it is not, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved. In this case, the at least one annular ring prevents the elastic connection member from separating from the cylindrical portion when force is applied in the length direction. **Sheridan** discloses a hose, though not used in the same environment, having similar features, including bendable bellows and elastic end connections and includes an annular ring that functions to prevent the connection member from separating from the cylindrical portion. It would be obvious to one having ordinary skill in the art to provide to the cylindrical end portion of **Tamborini** an annular ring as suggested by **Sheridan** in order to prevent separation of the connection member. The combination of various references are necessary to reject the various combinations claimed regarding both ends of the pipe, wherein one or both ends may or may not have cylindrical portions and they may or may not have the connection pieces

connected to the cylindrical portion with an annular ring or directly onto the bellows. No reference discloses all of these features individually, but the collection of prior art discloses that none of the recited features are patentable in either combination.

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Patrick F. Brinson** whose telephone number is (571) 272-4897. The examiner can normally be reached on M-F 7:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Y. Mar** can be reached on (571) 272-4906. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patrick F. Brinson  
Primary Examiner  
Art Unit 3754

P. F. Brinson  
July 29, 2005